

Gould: Pathophysiology for the Health Professions, 4th Edition

Chapter 03: Immunity and Abnormal Responses

Test Bank

MULTIPLE CHOICE

1. Neutrophils:
 - a. are phagocytic cells
 - b. produce histamine
 - c. produce antibodies
 - d. are elevated during an allergic response

ANS: A
2. Which cells are required to process and present antigens from foreign material as the initial step in the immune response?
 - a. T-helper cells
 - b. macrophages
 - c. eosinophils
 - d. monocytes

ANS: B
3. Humoral immunity is mediated by:
 - a. natural killer cells
 - b. T-lymphocytes (T cells)
 - c. B-lymphocytes (B cells)
 - d. neutrophils

ANS: C
4. A patient experienced an episode of influenza 6 months ago. A recent exposure to a mutated form of the same virus would result in:
 - a. a primary immune response
 - b. a secondary immune response
 - c. passive natural immunity to the virus
 - d. avoidance of any flu infection

ANS: A
5. Which type of immunity is provided by a vaccination?
 - a. active natural
 - b. active artificial
 - c. passive natural
 - d. passive artificial

ANS: B

6. When an allergen binds with IgE antibodies on mast cells, resulting in release of chemical mediators, this reaction is called:
- cytotoxic hypersensitivity
 - immune complex hypersensitivity
 - type I hypersensitivity
 - type IV hypersensitivity

ANS: C

7. The role of memory cells is to:
- change into an antibody-secreting cell following activation
 - immediately secrete antibodies following the first exposure to antigen
 - recognize the antigen and stimulate the immune response
 - bind complement to the antibody

ANS: C

8. Which statement applies to contact dermatitis?
- It occurs when IgE antibodies on the skin react with the causative substance.
 - It may result from ingested foods.
 - Urticaria (hives) gradually spread over the body.
 - A type IV reaction occurs in specific areas.

ANS: D

9. Which of the following causes anaphylaxis?
- a severe, systemic allergic reaction
 - type III hypersensitivity
 - cell-mediated hypersensitivity
 - immune complex deposits in many tissues

ANS: A

10. Why is anaphylaxis considered a critical situation?
- The heart rate is irregular.
 - Carbon dioxide levels in the body are greatly increased.
 - Bronchoconstriction and systemic vasodilation develop rapidly.
 - Manifestations are not obvious in the initial stages.

ANS: C

11. Incompatible blood transfusions result in:
- hemolysis of erythrocytes
 - a type I immune response
 - deposits in multiple organs
 - immune deficiency

ANS: A

12. An autoimmune disease is:
- a. excessive formation of antibodies following exposure to foreign material
 - b. an extreme response to normally harmless material in the environment
 - c. an abnormal response to ingested food and drugs
 - d. failure of the immune system to distinguish self from nonself

ANS: D

13. Systemic lupus erythematosus is caused by:
- a. a chronic allergic condition
 - b. development of an immune-deficient state
 - c. a deficiency of T-lymphocytes
 - d. immune complex deposits of antinuclear antibodies

ANS: D

14. Distinguishing clinical features of systemic lupus erythematosus include:
- a. inflammation in multiple organs
 - b. lack of a specific diagnostic blood test
 - c. acute onset, nonprogressive course
 - d. typical skin rash on the chest and back

ANS: A

15. Which of the following are the target cells for HIV?
- a. helper T-lymphocytes (CD4 lymphocytes)
 - b. B-lymphocytes
 - c. natural killer cells
 - d. macrophages

ANS: A

16. A diagnosis of HIV positive means that:
- a. the number of T-lymphocytes in the circulating blood is decreased
 - b. significant opportunistic infection is present in the body
 - c. the individual has AIDS
 - d. the virus and its antibodies are in the blood

ANS: D

17. HIV infection impairs:
- a. humoral immunity
 - b. cell-mediated immunity
 - c. both humoral and cell-mediated immunity
 - d. neither type of immunity

ANS: C

18. HIV is transmitted by:
- a. kissing or coughing into another's face

- b. infected secretions on toilet seats
- c. any contaminated surface and skin
- d. blood, semen, and vaginal secretions from an infected person

ANS: D

19. Serious infections frequently occurring in patients with AIDS include:

- 1. tuberculosis
- 2. *Pneumocystis carinii* pneumonia
- 3. influenza
- 4. tetanus

- a. 1, 2
- b. 1, 4
- c. 2, 3
- d. 3, 4

ANS: A

20. Which of the following statements does *NOT* apply to MHC proteins or molecules?

- a. They are genes on chromosome 6.
- b. All members of a family have identical MHCs.
- c. They alert the immune system to virus-infected cells.
- d. A close match is essential for successful tissue transplants.

ANS: B

21. CD4-positive helper T-cells function by:

- a. direct cytotoxic action
- b. facilitating all immune system activity
- c. production of immunoglobulins
- d. inactivating allergens

ANS: B

22. Host-versus-graft disease refers to:

- a. hyperacute rejection of tissue
- b. T-cells in grafted tissue attacking host cells
- c. infection resulting from immunosuppression therapy
- d. transplant rejection by the recipient's immune system

ANS: D

23. Which of the following complications does *NOT* occur frequently in AIDS patients?

- a. Kaposi's sarcoma
- b. wasting syndrome
- c. lymphoma
- d. polyarthrititis

ANS: D

24. Which of the following characteristics apply to the agent HIV?

1. It contains 2 strands of DNA.
2. It tends to mutate frequently to form new strains.
3. The incubation period is extremely short.
4. It is inactivated by heat and many disinfectants.

- a. 1, 2
- b. 1, 3
- c. 2, 4
- d. 3, 4

ANS: C

25. In cases of HIV infection, the “window period” refers to the time between:

- a. entry of the virus into the blood and the initial manifestations
- b. entry of the virus into the body and the appearance of antibodies in the blood
- c. entry of the virus into the body and a significant drop in CD4 T-helper lymphocyte count
- d. diagnosis of “HIV positive” and diagnosis of “AIDS”

ANS: B

26. Which of the following is an effect of cytokines? They:

- a. activate and stimulate proliferation of B and T lymphocytes
- b. destroy antigens quickly
- c. increase the rate of mitosis in tumors
- d. cause immediate pain

ANS: A

27. What does *seroconversion* mean in relation to HIV and AIDS?

- a. The virus has been identified in the blood and body fluids.
- b. Antibodies for HIV have been identified in the blood.
- c. HIV was found in lymphocytes.
- d. Active infection has developed in the patient.

ANS: B

28. Which of the following statements is TRUE regarding a patient who is HIV positive?

- a. No medication is required until T4 cell count drops below normal range.
- b. Antibodies are present, destroying the virus and preventing transmission to others.
- c. Antibodies in the blood indicate presence of virus and possible transmission to others.
- d. Enzymes have not yet converted RNA to DNA for replication.

ANS: C

29. The term *tolerance* refers to:

- a. surveillance and destruction of new cancer cells by the immune system
- b. the ability of the immune system to ignore “self” cells

- c. the ability of T- and B-lymphocytes to work together
- d. the role of lymphoid tissue in the body defenses

ANS: B

30. Which of the following statements apply to the complement system?
- a. It is activated by IgE.
 - b. It blocks the inflammatory response.
 - c. It consists of proteins in the blood that must be activated.
 - d. It may destroy antibodies in the circulation.

ANS: C

31. Which of the following statements regarding immunoglobulins is TRUE?
- a. They consist of a unique sequence of amino acids.
 - b. They are produced in the red bone marrow.
 - c. They are attached to mucosal membranes at entry points into the body.
 - d. IgA binds to allergens.

ANS: A

32. Which of the following is NOT a cause of immunodeficiency?
- a. hypoplasia of the thymus
 - b. delayed hypersensitivity
 - c. immunosuppressive drugs
 - d. atrophy of the lymph nodes

ANS: B

33. Which statement is TRUE regarding infants born to HIV infected mothers?
- a. Infants usually test negative for HIV after birth.
 - b. There is little risk of infected mothers passing the virus to their infants during delivery.
 - c. Breast milk does not contain HIV or antibodies.
 - d. Infants test positive for HIV due to presence of maternal antibodies.

ANS: D

34. The most common cause of death in AIDS patients is:
- a. HIV encephalopathy
 - b. tuberculosis
 - c. *Pneumocystis carinii* pneumonia
 - d. *Candida* infection

ANS: C